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## Inclusión y territorialidad en la nivelación general para el examen Ser Bachiller en el Ecuador

### *Inclusion and territoriality in the general leveling for the Ser Bachiller exam in Ecuador*

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(Received on: 09/03/2020; Accepted on: 13/04/2020; Final version received on: 07/05/2020)

Cita del artículo: Haro-Jácome, O., Simbaña-Cabrera, H. y Aguilar-Paoquiza, J. (2020). Inclusion and territoriality in the general leveling for the Ser Bachiller exam in Ecuador. *Revista Cátedra*, 3(2), 16-33.

### Resumen

El artículo describe la inclusión: por género, etnia, discapacidad; y por territorialidad provincial, cantonal e institucional de bachilleres participantes en el Curso de Nivelación General, segundo proceso del año 2019, ejecutado por la Secretaría de Educación Superior, Ciencia, Tecnología e Innovación (SENESCYT), en convenio con la Empresa Pública UCE. El tratado puntualiza la situación de derechos de la juventud que se capacita para rendir el



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examen Ser Bachiller. La investigación se fundamenta en el enfoque cuantitativo no experimental, los hechos se abordan desde la perspectiva transversal y su profundidad es exploratoria-descriptiva. Los instrumentos de campo fueron: la encuesta en línea aplicada mediante la plataforma de la Universidad Central del Ecuador, aplicada a 7.665 bachilleres, de los cuales contestaron 4.073 que se constituyó en la muestra casual no probabilística. Las notas para observar participación-aprobación se extrajeron de las aulas virtuales por dominio de la plataforma. Se descubrió que bachilleres desertores y reprobados superan levemente a aquellos promocionados. En inclusión por género la promoción de mujeres es muy superior a varones y otros géneros; por etnias los mestizos superan ampliamente la participación y aprobación. No se reportaron casos de bachilleres con discapacidad en el curso. En territorialidad los bachilleres de la región litoral superan al resto de provincias y cantones de otras regiones. Mientras que por instituciones los planteles educativos públicos, regentados por el Estado, tienen mayor participación.

## Palabras clave

Bachilleres, educación superior, inclusión, nivelación académica, territorialidad.

## Abstract

The article describes inclusion: by gender, ethnicity, disability; and by provincial, cantonal and institutional territoriality of high school graduates participating in the General Leveling Course, second process of the year 2019, executed by the Ministry of Higher Education, Science, Technology and Innovation (SENESCYT), in agreement with the Public Company UCE. The treaty clarifies the situation of youth rights that are trained to take the Ser Bachiller exam (Be Bachelor). The research is based on the non-experimental quantitative approach, the facts are approached from the transectional perspective and its depth is exploratory-descriptive. The field instruments were: the online survey applied through the <http://www.filosofia-uce.com/> platform of the Central University of Ecuador, applied to 7,665 high school students, of which 4,073 answered that it was the casual sample not probabilistic. The notes to observe participation-approval were extracted from the virtual classrooms by domain of the platform. It was discovered that defending and failed high school graduates slightly exceed those promoted. In gender inclusion, the promotion of women is far superior to men and other genders; by ethnic groups the mestizos (half blood) widely exceed the participation and approval. No cases of high school graduates with disabilities were reported in the course. In territoriality, high school graduates from the coastal region surpass the rest of the provinces and cantons of other regions. While by institutions the public educational establishments, run by the State, have greater participation.

## Keywords

High school graduates, higher education, inclusion, academic leveling, territoriality.

## 1. Introduction

The policies of application to the Public Higher Education Institutions of Ecuador (IES) such as: universities, polytechnics and institutes were implemented as a pilot project in 2011 and officially and mandatory in 2012. The rules governing entry to the IES are: The Constitution 2008, Organic Law on Higher Education (LOES) and National System of Leveling and Admission (SNNA). The modality of entry through examinations is already nine years old



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and has been very controversial, due to factors such as: rights, inclusion, territoriality, interculturality, even the type of examination.

The entry into public IES through examination approval, in its implementation went through two rather differentiated stages. In a first stage the National Examination for Higher Education (ENES) from 2012 and then being a Bachelor since 2017.

One of the most controversial aspects is the inclusive or meritocratic conception of IES membership. Its guiding principles planned by SENESCYT, consistent in Article 3) of the Regulation of the National Leveling and Admission System (SNNA) 2019, provides that they are the: "(...) equality of opportunity, and freedom of choice of career or careers and institution" (SENESCYT [2019], p 2).

The principles of the SNNA are easily disputed, since for example the meritocracy according to the statement of Cociña (2013), a "(...) meritocratic society – which corresponds to the utopian view of a market society – is a society that, at least in principle, does not reduce – much less eliminate – the current levels of inequality or misery" (p. 4). Admission to Ecuador's higher education system, given the very disparate conditions in the distribution of wealth, has brought countless difficulties in accessing university and career of interest of each high school, on similar occasions.

The data for field analysis were extracted from the survey of associated factors of the General Leveling Course, May-July 2019, provided by the UCE Public Company to Ecuadorian high schools, in agreement with SENESCYT. This course was facilitated by the Linkage Unit with the Society of the Faculty of Philosophy, Letters and Educational Sciences.

The purpose of the study is to analyze the inclusion and territoriality factors in the participation-approval of high school students who attended the General Leveling process for the Ser Bachiller (Be Bachelor) exam. The period corresponds to the second process, May-July 2019, according to the annual planning of the Undersecretariat for Leveling (SENESCYT-Public Enterprise UCE, 2019).

The questions that it intends to investigate, in the light of the state of the question and the empirical data, are:

1. -How does the training for the Ser Bachiller exam offered by the State to Ecuadorian high schools identify and address differences in inclusion and territoriality, in order to reduce the exclusion of higher education, especially to young people in rural situations and periphery of cities? (Educational Inclusion, 2016), and
2. - How is territorial equity evident: geographical, social and individual (Aceves, 1997, p. 286), of baccalaureates in the virtual leveling offered by SENESCYT, for the examination of entry to Ecuadorian public IES.

Finally, the treaty seeks to approximate an explanation of the overall leveling contribution of SENESCYT to the wide gap in the Ser Bachiller test score. Above all, including peoples and nationalities, as a way to democratize entry to the Higher Education System, with competitive scores that facilitates access to IES and careers of their vocation and personal interest.

The article has the following structure: first, the introduction with basic conceptual approximations, the objective, research questions. Second, the definitions of study variables: general leveling, inclusion, territoriality. Thirdly, the methodological process. Subsequently the results and dusion, and conclusion are recorded.



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### 1.1 General leveling

The general leveling of high schools who are interested in applying to Ecuadorian public IES, as well as achieving a national or international scholarship for higher education, is regulated in several legal bodies. The rules that determine the leveling are basically the Constitution 2008, and more specifically the Organic Law on Higher Education (LOES), which under Article 81 provides for "a National System of Leveling and Admission, which guarantees equal opportunities in access, permanence, mobility and in the egress" (National Polytechnic School [2019, p. 1]).

There are two levels of income to higher education regulated by Article 3 of the LOES Regulation expressing Leveling. It will take into account heterogeneity in the formation of high school and/or the characteristics of university careers" (SNNA [2011], 10).

First, the general leveling, which is free training under the responsibility of SENESCYT (formerly by the IES), is carried out to high schoolers who did not achieve a place in one or more re-orders of the Ser Baciller exam. This course is held twice a year; one for the coastal and island regions and one for the Sierra and Amazonian regions. It is precisely in the general leveling, first period of the year 2019 that the field study was carried out.

Secondly, the career leveling that is an induction course for high schools who already passed the Ser Bachiller, applied and were accepted to a University Career. This training is operated by UNESCO knowledge areas and is in charge of IES.

### 1.2 Educative inclusion

Inclusion is an essential factor for any service delivery process in Ecuador, especially in the assessment of knowledge for access to rights purposes. Educational inclusion is recognized as a principle by the Organic Law on Intercultural Education which in Article 11, literal v. states:

Equity and inclusion ensure that all people have access, permanence and completion in the Education System. It guarantees equal opportunities for communities, peoples, nationalities and groups with special educational needs and develops an ethic of inclusion with affirmative action measures and a school culture included in theory and practice on the basis of equity, eradicating all forms of discrimination" (Asamblea Nacional, 2011, p. 11).

The principle of inclusion encloses the whole of Ecuadorian society. Any high school who is interested in entering the IES, must have opportunity without discrimination for its origin, social, cultural and worse conditions for physical differences, ways of learning or health, that is, there are no prerequisites for exercising rights. Leiva (2013) argues that: "While inclusive education pays special attention to vulnerable and marginalized groups, its purpose is to fully realize the potential of every individual and not just that of specific groups" (p. 7).

The principle of meritocracy declared by the SNNA regulations is completely contradictory to social inclusion and particularly to education, because while the former puts the whole of society in the same educational condition, which is a chimera in an extremely heterogeneous society between socio-economic sectors; the second clearly recognizes the differences between the social sectors, but advocates permanent processes that recognize these differences, for the equitable benefit of all, in this case, in university admission.



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### 1.3 Territoriality

The territorial category is currently widely used in social planning systems, especially in intervention projects to improve the living conditions of Community sectors. Fundamentally, it focuses on human beings and geographical space, as a dialectical whole that interacts in society with cultural, economic and even environmental effects on rurality. Farrell, Trillón, and Soto (1999) testify that, "the territorial approach induces the integration of public and private institutionality linked to rural development and the empowerment of participating local actors, fundamental aspects for the appropriation of the process; it also has a multiplier effect on other territories" (p. 10).

Another widespread concept states that: "The territorial approach to rural development means a change of perspective: from the sectoral to the multisectoral, promoting multidimensional analysis (economic, political, social and environmental elements, among others)" (Villalobos, 2015, p.s/p). It is precisely that in this geographical space, essentially human and harmonious where life happens, these multiform relationships and forms of organization-action-collaboration happen, so that society can survive and become time.

In analyzing in the variable territoriality to the general leveling, "the territory in this perspective must be considered beyond its dimension of dominance, integrated into a cultural and social conception, in addition to the administrative and management that has traditionally prevailed" (García and Muñoz, 1999, p. 181). The territoriality approach is a multidimensional factor that is present in the attention to the right of entry to Ecuadorian IES, beyond the purely geographical.

### 1.4 Inclusion and territoriality in the general levelling

The educational and territorial inclusion in the general leveling provided by SENESCYT, although important institutional measures have been taken lately, is still a long way from welcoming high schoolers in optimal conditions, i.e. with policies of effective IES access. On inclusion in higher education, particularly in general leveling, Pérez-Castro (2019) argues that:

The expansion of educational opportunities for all those groups in vulnerable situations, who have been excluded from the school system (...) for reasons of social inequality (poverty, rurality, gender, ethnicity and disability); institutional causes (action plans, supply conditions, institutional strategies, resources, among others); or by subjective personal factors (beliefs, values and attitudes) (p. 149).

The principles of: meritocracy, equity and equal opportunities that guide the examination of income to higher education in Ecuador, both in the ENES and the Ser Bachiller, contradict the inclusion, because they universalize the same examination and its consequences for all. While inclusion involves differentiated processes, to address the particularities and deficits of many high schools, through differentiated tests, contextualization of the examination and affirmative action.

To address inclusion and territoriality as the human rights of high schools, Haro (2018) recommends that it be acted by "a strong institutional relationship between the Ministry of Education and SENESCYT to design and implement clear policies in the educational transition from high schoolers to university, recognizing the cultural, historical and socio-economic aspects of Ecuadorian society" (p. 298). The public policy of university application involves the participation of all state entities related to the law of youth, a process that is still in caumder.



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The process of transitioning from high school to college is itself complex, as teens are overcoming a stage of personal crisis. Unfortunately young people do not have professional guidance in the school and above all their educational process, in practice, is very differentiated between the urban and rural, as well as between the centrality and the periphery of the city. Socio-economic conditions are mostly poverty in families. The above aspects have been permanently denying access to higher education.

## 2. Metodology

The study was developed based on the principles of the quantitative methodological paradigm, a non-experimental design. The approach to the phenomenon was cross-sectional and the depth of analysis was exploratory-descriptive as it is a new phenomenon in the Ecuadorian context. The statistical treatment was carried out with the application of the Excel program to organize the data, then it was submitted to the SPSS package for the analysis of variables.

The data was extracted from the survey of associated factors applied at the beginning of the course and from the approval statistics of the general leveling, virtual modality, hosted on the UCE platform, <http://www.filosofia-uce.com/>, by the Directorate of Information and Communication Technologies (DTIC), between the months of May and June 2019. The survey was applied to high school graduates as a requirement for their enrollment in May, while the approval statistics were obtained from the database in June. Information processing was a mandatory component of the terms of reference (TDR) with SENECSYT. The notes to observe promotion were taken from the virtual classrooms of the five domains hosted on the platform.

The study population consisted of 7,665 high school graduates, previously reported by the SENECSYT Sub-secretariat for Leveling. The effective sample that provided data for the empirical analysis was 4,073 high school graduates, who effectively participated in the leveling. The sampling technique was convenient, the same as according to Otzen and Manterola (2017), it is applied due to "(...) the convenient accessibility and proximity of the subjects for the researcher" (p. 30).

The criterion of sample representativeness is relative because; On the one hand, the sample exceeds 50% of the population, which allows the results to be generalized to the target population, but a limiting factor is that the sample selection was not random.

## 3. Results and discussion

Table 1 summarizes the tuition, movement and promotion of bachelors in the General Leveling Course executed by the Faculty of Philosophy (FFLCE) of the Central University of Ecuador (ECU). The 4,073 high schools that accessed the platform and are participants in the course throughout the country, are constituted in 100% of effective beneficiaries, is constituted in the study sample. Of this great total; 2,184 young people, corresponding to 53.62% did not complete their evaluations on the virtual platform, after having already made contributions and evaluations, therefore they are categorized as withdrawn and exceed half of beneficiaries. In Garcia's view (2007), the "causes of abandonment (...) of an online educational offer (are) the course materials (...), little time (...) for the realization of the task, the technological conditions (...) and communications with the tutor as a facilitator and guiding element" (p. 12). The course is completed by 1,889 high schools, corresponding to 46.38%, less than half of those retired high schools.



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Virtual Modality	High School	Movement Enrollment			Final Promotion		
	Reported by SENESCYT to the ECU	Enrollment UCE	Don't access Platform	Access Platform	Retired	Reprobated	Approved
Starting totals	7.665	7.665	3.592	4.073	2.184	433	1.456
Percentage of progress		100%	46.9%	53.1%			
		Percentage of promotion (final)		100%	53.62%	10%	35.75%

Table 1. Enrollment, movement and promotion of high school degrees in the course

Figure 1 systematizes the access of baccalaureates to the platform of the ECU, where of 7,665 high schools effectively enrolled, interact in virtual classrooms 4,073. Firstly it describes the evolution of your participation in the course, from tuition to promotion, where 3,592 (46.9%) young people did not ratify their enrolment on the leveling platform of the Central University of Ecuador. Consequently, 4,073 high schoolers benefited from effective training, corresponding to 53.1% of the total of enrollees, is a higher amount than those who did not enroll.

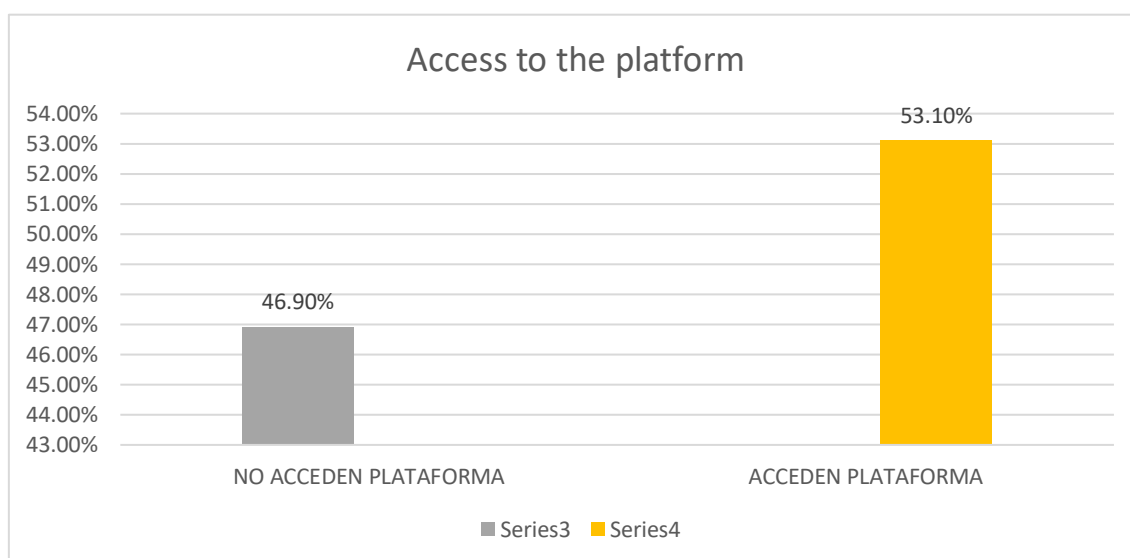


Figure 1. Percentage of platform access

Figure 2 illustrates the course approvals, with 1 456 bachelors corresponding to 35.75% exceeding 70% in their domain and attendance assessments, consequently they approve the course, it is the most relevant data. The negative is that they fail 433 high schools, corresponding to 10% of participants.

To calculate approvals, scores of five domain curricular activities per week were considered, for 10 weeks, with a total of 150 activities evaluated. In addition, interaction in the virtual classroom was observed for a minimum of 70% of planned activities in the domains. Virtual classrooms were enabled for 24 hours per day for 7 weekly days for partial domain activities.



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About those high schools who signed up for the SENESCYT platform, but then retired. This group took the quota without first knowing the methodology of the course (virtual and online mode) and working hours. Once they entered the platform, they opted for their voluntary retirement, with no record of learning activities. A decisive aspect that leads to the measurement of withdrawal responds to the "easy" offers in the market, of face-to-face or semi-presencial courses that "guarantee" the application to the careers that are interested.

They also express distrust in the processes implemented by SENESCYT, because in this course, at the last minute the start dates were changed to a period very close to the Ser Bachiller exam. This circumstance did not favor with enough time for its preparation, because it was only 36 days from Monday to Sunday with an average of 7 hours a day of almost exclusive dedication to its training, which is commonly done with a maximum time of 4 hours a day, in about 63 days from Monday to Friday, in about 12 weeks, with rest intervals.

Another reason why several high schools retired responds to the lack of technological infrastructure in different parts of the country. Likewise, several high schools live and work in rural sectors which limits the development of activities on a daily basis, as programmed on the platform. The meeting relates to the report that: "36.0% of households nationwide have access to the internet (...). In the urban area, 63.8% of the population has used the internet, compared to 38.0% of the rural area" (INEC, 2016, p. 7 and 14). Finally, there is an under-analyzed aspect, but that is a reality in young people between the ages of 18 and 25, in this age range there are cases of those who wish to enter higher education institutions, but they live a marked mobility, which requires unexpected relinquishing their goals and aspirations for professionalization. For they move to other cities, even abroad, they change housing sectors because of work or the need for work or because they form a family and acquire other responsibilities

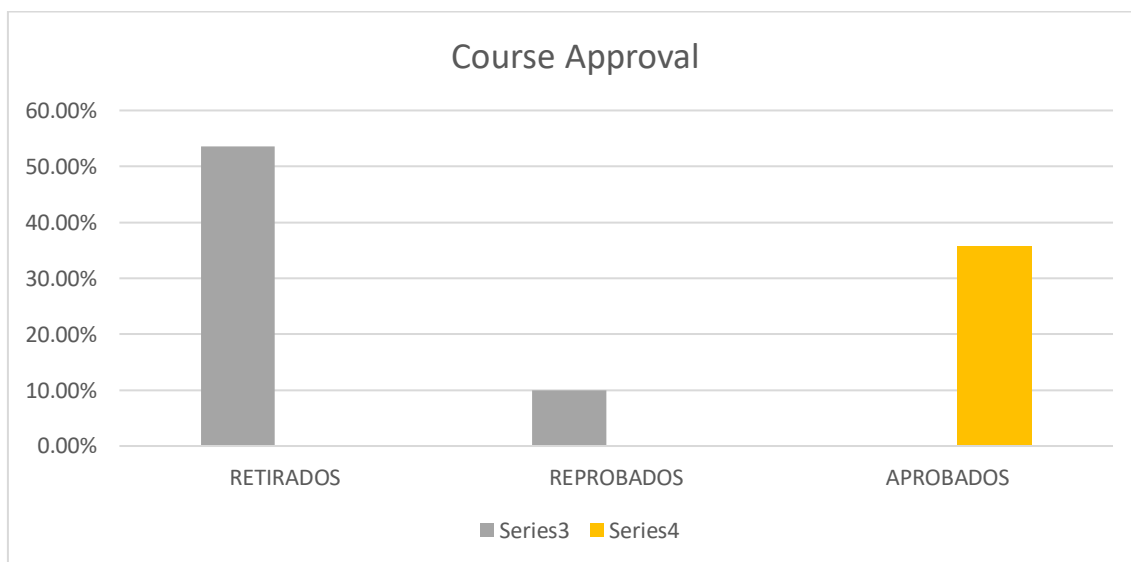


Figure 2. Course approval

Table 2 systematizes indicators of effective baccalaureate participation in the leveling course in the gender category, on which 4 073 participating high schoolers are analyzed. Of the total indicated are valid data for the analysis 2 096 baccalaureates (51.5%), while 1 977



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(48.5%) are lost data from high schoolers who did not answer the survey on their gender identity.

Approvals, by gender, show that it is the most successful women in the course, with a total of 786 female high schools (69.1%) of the total approvals. Males are only 347 high school 30.5% and 9 young, one (0.4%) who identify their gender as others, and would be neither male nor female. The trend of highest approval of women is given by the generic composition of the baccalaureates participating in the course which is 4 073 (100%) of which 1 405 (34.5%) identify themselves as women, compared to 682 (16.7%) 9 (0.2%), giving 51.5% of the total. The unveiling is corroborated by the claim that: "women (...) at the time of evaluations or exams they come more than men to support friends, teachers, or family members when they have doubts in study topics, they are more aware of the teaching-learning process than men" (Sepulveda, and others [2011], 3).

Gender	Approved	Disapproved	Retired	Total
Femenine	786	178	441	1405
	69.1%	65.2%	64.4%	67.0%
Masculine	347	93	242	682
	30.5%	34.1%	35.3%	32.5%
Others	5	2	2	9
	0.4%	0.7%	0.3%	0.4%
Total	1138	273	685	2096
	100.0%	100.0%	100.0%	100.0%

Table 2. Participation of high school students in the course, by gender

Table 3 analyses the composition of graduates approved by ethnicities, firstly it is found that the Mestizo (half Blood) population is the one with the greatest participation in the different indicators described in the course, because they approve 1 294 (89.3%) beneficiary high schoolers. Secondly, the montubios (rural coastal people) with 58 people (4.0%), which, together with other indicators such as the origin by provinces and schools, explains that the largest population of high schools participating in the course come from the Ecuadorian coastal region.

Then, but far away, the auto-determined population is located as white, followed by indigenous, Afro-descendants, mulattos and others, with very low percentages, which add up give 7% of participants, which is statistically very little significant. The result shows and at the same time allows "(...) note that there are differences in ethnic self-identification averages, where indigenous and Afro-Ecuadorian groups maintain lower averages than those that self-identify as mixed/white" (Revalo-Gross [2018], 132).

Ethnicity	Approved	Disapproved	Retired	Total
Afro-descendant	24	11	72	105
	1.6%	2.6%	3.3%	2.7%



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White	37	16	59	112
	2.6%	3.7%	2.8%	2.8%
Indigenous	19	2	27	48
	1.3%	0.5%	1.3%	1.2%
Mestizos	1294	363	1827	3484
	89.3%	84.6%	86.1%	87.1%
Montubio	58	28	96	182
	4.0%	6.5%	4.5%	4.6%
Mulatto	15	8	29	52
	1.0%	1.9%	1.4%	1.3%
Other	2	1	14	17
	0.1%	0.2%	0.7%	0.4%
Total	1449	429	2122	4000
	100.0%	100.0%	100.0%	100.0%

Table 3: Participation by Ethnic Identity

The composition of approved participants (Table 4), when categorized by disability, who said they did not have a disability, but approve the course are 1 446 (99.3%) almost all beneficiaries. While, those who expressed a disability: "hearing, physical, intellectual, language, psychosocial and visual" (National Directorate of Disabilities (DND), 2019, p. 3), and approved, do not exceed 1% of high schoolers. The data is less than the percentage of disabilities that in Ecuador 2 019 is 2.74%, dividing among the national population, which according to the National Institute of Statistics and Census (INEC) is 17 379.713 inhabitants (INEC, 2019), with the figure of 475.747 people with disabilities registered with the National Council for Equality of Disabilities.

Disability	Approved	Disapproved	Retired	Total
Physical	5	2	3	10
	0.3%	0.5%	0.1%	0.2%
None	1446	429	2168	4043
	99.3%	99.1%	99.3%	99.3%
Psychic	1	1	1	3
	0.1%	0.2%	0.0%	0.1%
Other	4	1	12	17
	0.3%	0.2%	0.5%	0.4%
Total	1456	433	2184	4073
	100.0%	100.0%	100.0%	100.0%

Table 4: Disability Participation

Table 5 examines the participation of high schoolers by province. The statistic of tuition and most significant participation of baccalaureates in the course, by categorizing the 23 provinces that have presence, highlights that Guayas is the highest represented 1 453 (36.6%), followed by Manabí with 721 (18.16%) third, Pichincha with 569 (14.33%), fourth, El Oro with 379 (9.5%) and in fifth place Los Ríos with 199 (5%).

The participatory feature of high schools in the five most represented provinces; in the first instance it can be attributed to the population formation of young people of income to higher education. Another causal factor may be connectivity coverage and increased dissemination by SENESCYT in certain 18 provinces. The level of approval of the course, when categorizing by provinces reveals statistical behavior other than the enrolment rate.



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The four best performing jurisdictions are: Tungurahua 15, Imbabura 29, Loja 44 and Azuay 14, although their participation is very low. While, in the five provinces with the highest participation, approximately one in three enrolled high schools approves leveling. This empirical analysis coincides with (García & Muñoz, 1999).

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The level of approval of the course, when categorizing by provinces reveals statistical behavior other than the enrolment rate. The four best performing jurisdictions are: Tungurahua 15, Imbabura 29, Loja 44 and Azuay 14, although their participation is very low. While, in the five provinces with the highest participation, approximately one in three enrolled high schools approves leveling. This empirical analysis coincides with (García & Muñoz, 1999).

Province	Approved	Disapproved	Retired	Total
Azuay	14	2	21	37
Bolívar	6	4	9	19
Cañar	4	1	6	11
Carchi	5	0	4	9
Chimborazo	9	0	10	19
Cotopaxi	3	1	15	19
El Oro	148	41	190	379
Esmeraldas	16	4	31	51
Galápagos	1	0	2	3
Guayas	463	147	843	1453
Imbabura	29	5	28	62
Loja	44	14	44	102
Los Ríos	74	25	100	199
Manabí	286	93	342	721
Napo	1	0	4	5
Orellana	0	0	1	1
Pastaza	0	0	3	3
Pichincha	209	68	292	569
Santa Elena	48	10	81	139
Santo Domingo de los Tsáchilas	42	8	77	127
Sucumbíos	1	0	5	6
Tungurahua	15	2	13	30
Zamora Chinchipe	2	1	3	6
Total	1420	426	2125	3971

Table 5: Participation of high school students by province

Table 6 summarizes the enrollment and participation of high schoolers by cantons. Priority is given for the analysis of 44 cantons, where there is evidence of participation of at least 10 high schools in the leveling, out of 147 beneficiary cantons. The first relevant aspect of territoriality is that the 34 cantons with the highest participation in the course are from the



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Littoral Region, 10 from the Sierra Region and none from the Amazon or Galapagos. The order of participation of baccalaureates correlates with the population composition by regions of Ecuador, however, there is an superiority of baccalaureates of coastal cantons.

The five cantons with the highest tuition fee, in descending order are: Guayaquil with 1 215 baccalaureates, double that Quito with 518, then Machala with 214, then Portoviejo with 127 and at the end Santo Domingo de los Tsáchilas with 114 baccalaureates. Guayaquil participates in the leveling, with a third of high schoolers from all over the country, and more than double Quito, is the largest beneficiary.

The approval rate per canton, according to the statistical analysis revealed, that of the 44 prioritized cantons approve approximately one in three high schools, i.e. 1136 (35%), while they fail 336 (10.35%), and defect 1,774 (53.73%) very high figure. The baseline data arises from 3,246 bachelors (100%) enrolled in the cantons with the most presence of baccalaureates. The 726 un-analyzed high schools correspond to 103 cantons, whose presence in the leveling does not exceed 9 subjects enrolled.

Canton	Approved	Disapproved	Retired	Total
24 de Mayo	6	2	3	11
Ambato	10	2	11	23
Arenillas	5	2	8	15
Buena Fe	6	0	5	11
Cayambe	4	0	6	10
Chone	11	0	14	25
Cuenca	9	1	12	22
Daule	8	3	20	31
DM. Quito	190	64	264	518
Durán	21	13	49	83
El Carmen	12	1	10	23
El Empalme	3	2	7	12
El Guabo	5	2	18	25
Esmeraldas	10	3	21	34
Guayaquil	396	114	705	1215
Huaquillas	2	1	14	17
Ibarra	19	4	21	44
Jipijapa	12	1	22	35
La Concordia	4	0	9	13
La Libertad	21	5	41	67
La Troncal	3	1	6	10
Loja	23	13	27	63
Machala	100	23	91	214
Mejía	4	0	7	11
Milagro	9	4	20	33
Montecristi	19	10	26	55
Naranjito	3	1	6	10
Otavalo	6	0	4	10
Pasaje	15	5	32	52
Pedernales	2	1	11	14
Piñas	2	2	7	11
Portoviejo	46	18	63	127
Quevedo	26	8	40	74
Riobamba	9	0	9	18
Rocafuerte	10	4	6	20
Rumiñahui	8	3	12	23



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Salinas	8	2	11	21
Santa Ana	7	2	6	15
Santa Elena	19	3	29	51
Santa Rosa	15	4	12	31
Santo Domingo	38	8	68	114
Sucre	5	1	8	14
Valencia	2	2	6	10
Vinces	3	1	7	11
<b>Total</b>	<b>1136</b>	<b>336</b>	<b>1774</b>	<b>3246</b>
No analizados				726
Matriculados				3972

Table 6. Enrollment and participation of high schoolers by cantons

Table 7 contains the bachelor's enrollment data by type of school of origin. In this respect, 1 568 (74.49%) high schools are public campuses, 363 (17.24%) municipal campuses, 154 (7.32%) are from private campuses and just 20 (0.95%) of fisco-missionary origin (public-private financing).

The composition of approved and unapproved beneficiaries, in relation to the types of school of origin of the baccalaureate, 845 (73.9%) high schoolers are of public origin, most of them. A major group of 197 (17.2%) young people are from private campuses in second place; 90 (7,9%) high school graduates are of fisco-missionary origin in third place, and; only 10 are municipally funded educational units, for the total approved of 1 143 (100%).

	Approved	Reprobado	Retired	Total
Fisco missionary	91	19	44	154
Municipal	10	3	7	20
Private	197	53	113	363
Public	845	199	524	1568
<b>Total</b>	<b>1143</b>	<b>274</b>	<b>688</b>	<b>2105</b>

Table 7. Enrollment and approval by school

El Table 8 condenses the overall averages of the assessment notes applied by domain. The evaluations have tasks, duties and exercises that the bachelors responded through questionnaires applied in the virtual classrooms, whose notes are hosted on the UCE platform.

The averages of the scores achieved by the high schools on the platform are about 15 points per week for 10 weeks total 150. The scores were weighted to 1000 points, to analogate the Ser Bachiller test score.

When analyzing the averages of the high schools that pass the course, the highest corresponds to abstract domain with 905.39/1,000 points, and the lowest to social domain with 812,12/1,000. The overall average of those approved in all domains is 868.55/1,000 points, with which the beneficiary high schoolers ratified their grades in the Ser Bachiller exam, consequently they have options to apply for public university career.

The highest overall average over 1,000 points is observed in linguistic domain with 588/1,000 and the lowest mathematical domain with 493/1.000. In general, the average



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domains considering approved, failed and withdrawn is 550/1.000 points which is a regular overall result, as it does not exceed the standard minimum score of 600 points.

The evaluation was developed as the last stage of the curriculum process, to observe the behavior of high schoolers on cognitive knowledge, skills, skills and abilities for the effective resolution of the Ser Bachiller exam. The virtual instruments used were: exercises, duties, tasks, simulations, as well as participation in interaction forums and participation in virtual conferences. A valuable indicator of evaluation was the interactive participation of high schools in virtual classrooms, because this looked at the degree of concern and commitment to their own preparation for the exam, beyond the target score, (Martínez, 2015).

The grade data achieved by classroom and domain served to assess the progress of work scores and progress weekly. With this permanent diagnosis, those high schools that were needed could be reinforced, while encouraging those with the best scores.

In the end it can be extrapolated that the results of the evaluations, despite the online modality, were quite significant, since 3 out of five high schools, 62% of them satisfactorily exceed the minimum 70% for approval, as an average of all evaluations and participation.

Domain	General Average/15	General Average /1000	Average approved /150	Average approved/1000
Abstract	86.28	575	135.81	905.39
Scientific	86.39	576	135.10	900.68
Lingüística	88.16	588	133.84	892.24
Matemática	73.88	493	135.13	900.88
Social	77.65	518	121.82	812.12
Total	82.47	550	651.41	868.55

Table 8. Average assessments by domain summary

#### 4. Conclusions

The main discoveries that are achieved in the study, which respond to the proposed research questions, are as follows:

The rate of graduates removed from the course is slightly higher than permanent participants. Participation-desertion percentages border 50% of the total. Among the main causal factors for dropout are: distrust with variations in the planning processes of the course by SENESCYT and poor technological and communicative infrastructure in the peripheral sectors of cities and especially rural ones.

When observing promotion of participating high schools of the general leveling course, the percentage of graduates that pass is much higher. Contrary to the percentage of those who fail is very low, but also representative, because it involves affecting the public investment of the State, and at the same time less access to the right of entry to IES, spatially from marginalized sectors.

The inclusion by gender in the leveling course shows that the highest percentage of participation and approval is for women, who more than double men and other genders. The survey did not identify genders that are identified exhaustively, but only in the other



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category, but in a non-significant percentage. However, the lost data is almost similar to the valid data.

The inclusion by ethnicity, expresses that there is a percentage of participation and approval of the very high course in the group that defines itself as half-breed. The other constant ethnicities in the survey do not exceed one tenth of the total and include in order the second, then white, Afro-descendant indigenous people. The explanation of the montubios in the second place is because the greatest participation was of coastal high schools.

In disability inclusion, the data shows that high school without any disabilities participate and approve the course in almost the total percentage. While high schoolers with a disability their participation is almost nil. This phenomenon may be due to the mode of virtual and online training that does not meet special educational needs, which implies that subsequent processes serve this sector.

The inclusion by territoriality, in terms of the participation of baccalaureates by provinces, indicates that there is mostly a share of the coasters. In the highest approval group consists of four, also of the coastal region, only one of the mountains and none of the east. Instead, the approval of the course by provinces has four of the mountains in the first places, although its presence is minimal, which explains to some extent, the heterogeneity in educational quality and state care in the national context.

In terms of the participation of baccalaureates by cantons, the course involves 147, more than half of the 209 cantons distributed in the 23 provinces, since Morona Santiago had no presence. The largest number of cantons are from the coast, which is also related to the number of cantons among five of the highest participation are coastal, this finding correlates with national demographics. Participation has a supremacy of coastal provinces and cantons in the course. In the percentage approval by cantons, it was found that a third of high schools approve of curso, one tenth and half defect. It is clear that territorial inclusion is relative, therefore, not all cantons and provinces participate on an equal basis and population percentages.

In inclusion by territoriality of educational institutions, it is manifested that two fifths of participating high schools are from public campuses (fiscal and municipal) and a tenth of individuals, as the most representative. Approvals vary, as three-quarters are from official (fiscal) campuses first, after individuals the two-fifths second, finally a tenth approves of fisco-missionary campuses. Young people most in need of Ser Baccalaureate exam training are from state schools, compared to individuals and funerals.

The average grades achieved in the approval of the course reflect that the final average score of the domains treated, in the case of ratification in the Ser Bachiller exam, will provide options for high schoolers to pass and apply for university degrees, with some ease. Whenever the beneficiary high schoolers also consider the recommendations of the Vocational and Professional Orientation (OVP) discussed in the course.

Course approval notes may be due to very short and intensive academic management time, with which high school was trained. Only 36 days worked, Monday to Sunday. An approximate time of seven hours per day of participation in virtual classroom, without days of rest and recovery.



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## Acknowledgement

To the teaching, technical and administrative team that participated in the general leveling issue virtual modality, provided to graduates at the national level, in the months of May to July 2019, by agreement between the Public Company of Goods and Services ECU EP PROJECTS, with SENESCYT.

## Reference

- Aceves, F. (1997). La territorialidad. Punto nodal en la intersección espacio urbano-procesos de *comunicación-movimiento social*. *Comunicación y Sociedad (OECS, Universidad de Guadalajara)*(30), pp. 275-301.
- Arévalo-Gross, J. (2018). *La educación en Ecuador: logros alcanzados y nuevos desafíos. Resultados educativos 2017- 018*. Quito: Instituto Nacional de Evaluación Educativa.
- Cociña, M. (07 de 06 de 2013). <https://ciperchile.cl>. Obtenido de <https://ciperchile.cl/2013/06/07/cinco-argumentos-contra-la-meritocracia/>
- Dirección Nacional de Discapacidades (DND). (2019). [www.salud.gob.ec](http://www.salud.gob.ec). Obtenido de <https://www.salud.gob.ec/direccion-nacional-de-discapacidades/>
- Escuela Politécnica Nacional. (18 de Diciembre de 2019). [www.epn.edu.ec](http://www.epn.edu.ec). Obtenido de <https://www.epn.edu.ec/sistema-nacional-de-nivelacion-y-admision-snna/>
- Farrell, G., Trillón, S., & Soto, P. (1999). *Farrell, Gilda; La competitividad territorial: construir una estrategia de desarrollo territorial con base en la experiencia de leader. Innovación en el Medio Rural, Cuaderno No. 6 - Fascículo 1*. Bruselas: Observatorio Europeo leader.
- García, Á., & Muñoz, J.-M. (1999). El factor territorial en la política educativa: ¿Es posible una fundamentación pedagógica? *Universidad de Salamanca*, 11, pp. 177-189.
- García, E. (2007). El “abandono” en cursos de e-learning: algunos aprendizajes para nuevas propuestas. *Revista Iberoamericana de Educación*, 44(3), pp. 2-16.
- Haro, O. (2018). *Relación del examen nacional para la educación superior –ENES- y la vocación docente con el rendimiento académico del alumnado de la Facultad de Filosofía, Letras y Ciencias de la Educación de la Universidad Central del Ecuador*. Alicante-España: Universidad de Alicante.
- Inclusión Educativa. (2016). [www.inclusioneducativa.org](http://www.inclusioneducativa.org). Obtenido de <http://www.inclusioneducativa.org/ise.php?id=1>
- INEC. (2016). [www.ecuadorencifras.gob.ec](http://www.ecuadorencifras.gob.ec). Obtenido de [https://www.ecuadorencifras.gob.ec/documentos/web-inec/Estadisticas\\_Sociales/TIC/2016/170125.Presentacion\\_Tics\\_2016.pdf](https://www.ecuadorencifras.gob.ec/documentos/web-inec/Estadisticas_Sociales/TIC/2016/170125.Presentacion_Tics_2016.pdf)
- INEC. (15 de 12 de 2019). [www.ecuadorencifras.gob.ec](http://www.ecuadorencifras.gob.ec). Obtenido de <https://www.ecuadorencifras.gob.ec/estadisticas/>



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- Leiva, J.-J. (2013). De la integración a la inclusión: evolución y cambio en la mentalidad del alumnado universitario de educación especial en un contexto universitario español. *Actualidades Investigativas en Educación*, 13(3), pp. 1-26.
- Martínez, N. (13 de Marzo de 2015). <http://www.redicces.org.sv/jspui/handle/10972/2037>. Obtenido de <http://www.redicces.org.sv/jspui/bitstream/10972/2037/1/2.%20Evaluacion%20de%20los%20aprendizajes%20en%20la%20educacion%20virtua.pdf>
- Ministerio de Educación . (11 de 01 de 2011). <https://educacion.gob.ec>. Obtenido de [https://educacion.gob.ec/wp-content/uploads/downloads/2017/02/Ley\\_Organica\\_de\\_Educacion\\_Intercultural\\_LOEI\\_codificado.pdf](https://educacion.gob.ec/wp-content/uploads/downloads/2017/02/Ley_Organica_de_Educacion_Intercultural_LOEI_codificado.pdf)
- Otzen, T. y Manterola, C. (2017). Técnicas de Muestreo sobre una Población a Estudio. *Int. J. Morphol.*, 35(1), pp. 227-232.
- Pérez-Castro, J. (2019). La inclusión de los estudiantes con discapacidad en dos universidades públicas mexicanas. *Innovación Educativa*, 19(79), pp. 145-170.
- SENESCYT. (2019). *Reglamento del Sistema Nacional de Nivelación y Admisión SNNA*. Quito: Registro Oficial.
- SENESCYT-Empresa Pública UCE. (2019). *Términos de referencia para contratar la prestación del servicio de nivelación general mediante un curso en modalidad virtual a nivel nacional, para las y los aspirantes que postularon en el primer semestre 2019 y no obtuvieron un cupo a través del sistem*. Quito: SENESCYT-UCE.
- Sepúlveda, J., López, M., Torres, P., Luengo, J., Montero, E., & Contreras, E. (2011). Diferencias de género en el rendimiento académico y en el perfil de estilos y de estrategias de aprendizaje en estudiantes de Química y Farmacia de la Universidad de Concepción. *Revista Estilos de Aprendizaje*, 7(7), pp. 1-16.
- SNNA. (11 de Diciembre de 2011). [www.educacionsuperior.gob.ec](http://www.educacionsuperior.gob.ec). Obtenido de [https://www.educacionsuperior.gob.ec/wp-content/uploads/downloads/2012/07/SNNA\\_presenta\\_ción.pdf](https://www.educacionsuperior.gob.ec/wp-content/uploads/downloads/2012/07/SNNA_presenta_ción.pdf)
- Villalobos, O. (26 de 09 de 2015). <http://journalrural.com>. Obtenido de <http://journalrural.com/enfoque-territorial/#sthash.00a2hWtN.dpbs>

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